

Claims

5 1. A method for joining excitation poles (11) to a pole housing (10) of electrodynamic machines, in particular starter motors for starting internal combustion engines, in which each joining connection is attained by positive and nonpositive engagement, characterized in that the joining connection is attained by spot shaping of a separate rivet (13), which joins an excitation pole (11) and the pole housing (10), at at least one joining location.

2. The method of claim 1, characterized in that a rivet (13) in the form of a blind rivet is employed.

3. The method of claim 1, characterized in that the pole housing (10) is perforated so that a rivet shank (15) can be inserted through it.

4. The method of claims ~~1-3~~, characterized in that the blind rivet (13) is introduced into a joining hole (16) from the outside of the pole housing (10).

5 5. The method of claims ~~1-4~~, characterized in that the excitation poles (11) are perforated so that the rivet shank (15) can be inserted through them, and that the widening (28) of the rivet shank (15) that is associated with a riveting operation is effected downstream of a narrowing (23) of a first hole segment (18) in a second hole segment (19) of larger diameter than the first hole segment (18).

6. The method of claim 5, characterized in that the hole (17) in the excitation pole (11) is embodied as

a
through hole (31).

7. The method of claim 5, characterized in that the joining hole in the excitation pole (11) is embodied as a blind bore (33).

8. The method of claim 6, characterized in that the narrowing (23) of the joining hole in the excitation pole (11) is attained by drilling with a step drill.

9. The method of claim 5, characterized in that the narrowing (23) of the hole (31 or 33) in the excitation pole (11) is attained by reverse upsetting of a bead (32) created by perforation.

10. The method of claim 5, characterized in that by means of the conical form of the step (34) attained in the perforation, the excitation pole (11) is centered relative to the pole housing (10) during riveting by the rivet shank (15), which widens in the process.

claim 1
A 11. The method of ~~one of the foregoing claims~~ characterized in that each excitation pole (11) is secured to the inside of the pole housing (10) by means of two axially offset rivets (13).

12. An electrodynamic machine produced by the method of claim 1, in particular for starting internal combustion engines, whose excitation poles (11) are secured to the inside of the pole housing (10), characterized in that the excitation poles (11) are each joined to the pole housing by means of at least one rivet (13).